

Ecological Inventory of Wetland Sites in the Thompson Chain of Lakes and Vicinity

Prepared for the
Montana Department of Fish, Wildlife, and Parks

Submitted by
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SUMMARY OF FINDINGS

The Montana Natural Heritage Program surveyed seven wetland sites comprising 16 individual wetlands in the Thompson Chain of Lakes and vicinity (Figure 1). Five of these sites are located in and around the Thompson Chain of Lakes (Figure 2), while the remaining two sites are located to the east along the Little Blackfoot River and around Rogers Lake (Figure 3). These sites were inventoried and evaluated using the methodology described in Greenlee (1999). Table 1 provides a summary of the criteria used to evaluate the ecological significance of these sites. All sites were surveyed in the summer of 1999.

The sites surveyed encompassed a diversity of wetland types, including poor fens, depressional potholes, spring/seeps, lacustrine fringe, and beaver-modified riverine wetlands. Structurally, emergent communities are the most common vegetation types with shrub-dominated communities well represented. Forested wetland communities were inventoried only at Rogers Lake and are represented by small stands of wet spruce and aspen.

We documented several occurrences of rare plants and animals. Three populations of rare plants were identified: slender cottongrass (*Eriophorum gracile*) and pod grass (*Scheuchzeria palustris*) were found at Crystal Lake and poor sedge (*Carex paupercula*) was found at Rogers Lake. Common loon (*Gavia immer*) and black tern (*Chlidonias niger*) were observed at Rogers Lake, and common loon was also observed at Upper Thompson. In addition, we documented several common wetland plant associations in excellent condition, including slender sedge (*Carex lasiocarpa*), beaked sedge (*Carex utriculata*), and Drummond willow / beaked sedge (*Salix drummondiana* / *Carex utriculata*).

Ecological Significance

Overall, the sites inventoried are of high to moderate ecological significance. Specifically, Rogers Lake, Crystal Lake, Upper Thompson, and Lily Pad Lake ranked as having high ecological significance, and Hidden Lake, Lower Thompson, and Boiling Springs ranked as having moderate ecological significance. Table 2 shows how sites were scored for each criterion as well as the overall score.

In evaluating these sites, two factors stand out as negatively influencing their functional integrity and long-term viability: past timber harvesting and the presence of exotic species. The surrounding uplands of all sites have been impacted by timber harvesting and associated roading. These activities may adversely effect the hydrology of these sites by increasing runoff, nutrient loading, and sedimentation. Most of the wetlands are buffered by Streamside Management Zones. These buffers have some overstory component remaining and may somewhat ameliorate adverse hydrological effects.

The second, and perhaps more troubling, adverse influence is the presence of exotic species, such as redtop (*Agrostis stolonifera*), Kentucky bluegrass (*Poa pratensis*), Canada thistle (*Cirsium arvense*), and reed canarygrass (*Phalaris arundinacea*). Exotic species are established at all sites except Hidden Lake. At most of the other sites, exotics are present with high constancy, but are restricted to drier locations, such as drawdown zones around potholes. The most adversely effected site is Lower Thompson, where reed canarygrass is dominant throughout the site. The widespread presence and high constancy of exotic species at these sites is probably related to past grazing.

LITERATURE CITED

Greenlee, J.T. 1999. Ecologically significant wetlands in the Flathead, Stillwater, and Swan River valleys. Unpublished report to the Montana Department of Environmental Quality. Montana Natural Heritage Program. Helena. 192 pp.